

MATERIAL NUMBER 1.7149 · CLASS 1.7

1.7149

Chemical composition, mechanical and physical property values, and 17 standard designations from 8 regions.

DENSITY 7.75 g/cm³	OTHER DESIGNATIONS 17 in 8 regions	PROPERTY VALUES 7 on file
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Chemical composition

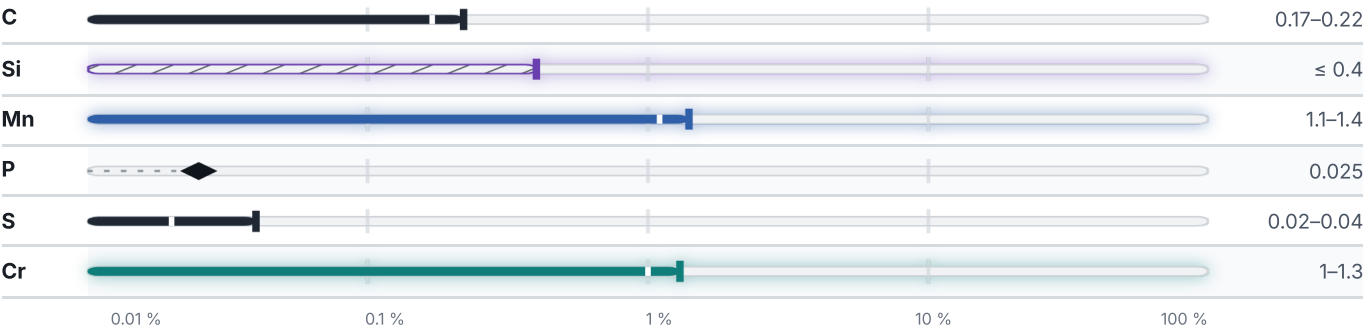
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 97 % ● Mn — 1.3 % ● Cr — 1.2 % ● Si — 0.4 % ● Traces & impurities · 0.3 %

Logarithmic scale, 0.01 % to 100 % — every value here compares directly, decade by decade.



The scale is logarithmic, not the element’s raw share of the alloy — the only honest way to fit 0.01 % and 100 % in one picture, and it means every value here can be compared with every other.

Predicted transformation temperatures

Not enough recorded composition to predict a transformation temperature for this grade — missing: Ni, Mo.

Mechanical properties

5 values across 5 conditions

TREATED TO IMPROVE SHEARABILITY	HB
Treated to improve shearability	255

SOFT ANNEALED	HB
Soft annealed	217
TREATED TO HARDNESS RANGE	HB
Treated to hardness range	170–217
TREATED TO FERRITE-PEARLITE STRUCTURE AND HARDNESS RANGE	HB
Treated to ferrite-pearlite structure and hardness range	152–201
NORMALIZED	HB
Normalized	140–201

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.75	g/cm³

Designations across standards

17 designations · 1 documented as identical

International	5	Poland	2
16MnCr5	iso	16HG	pn
16MnCrS5	iso	20HG	pn
20MnCr5	iso		
20MnCrS5	iso	Europe	1
21MnCr5	iso	20MnCrS5	This grade's own name din-en
United States	4	Russia / CIS	1
G48200	uns	18ChG	gost
G51150	uns		
G51200	uns	Latin America	1
4820	aisi-sae	4820	copant
France	2	Serbia	1
16MC5	afnor	Č.4382	srps
20MC5	afnor		

Note on use. The data is compiled to the best of our knowledge from publicly available standards and manufacturer documentation. It replaces neither material testing nor an inspection document to EN 10204. Please request a mill certificate to EN 10204 2.1, 3.1 or 3.2 together with your enquiry. The standard in its current valid edition always prevails.

Enquiry about 1.7149
Quotation, availability, mill certificate or a technical question — directly on the material page.

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ISSUED

Aug 20, 2026